Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

October 6th, 1857.

DR. RUSCHENBERGER in the Chair.

A paper was presented for publication in the Proceedings, entitled "Notes on American Land Shells, No. 2, by W. G. Binney;" which was referred to a Committee.

On motion of Dr. Leidy, it was unanimously resolved that a special vote of thanks be tendered to Dr. W. A. Hammond, U. S. A., for his valuable donations to the Museum of the Academy.

October 27th, 1857.

Vice President BRIDGES in the Chair.

The Committee on Mr. Binney's paper, presented Oct. 6th, reported in favor of publication.

Notes on American Land Shells. No. 2.

BY W. G. BINNEY.

HELIX (POLYGYRA) ACUTE-DENTATA. Testa superne et subtus parum planata discoidea, albida, glabra; anfractus 6 lævigati, quorum quinque æqualiter accrescentes, apicem brevissimam, vix elevatam formantes; ultimus permagnus, inflatus, prope peristomata bis valde scrobiculatus, ad aperturam deflectus; subtus anfractus 1½, ultimus ventricosus, alter rapide decrescens; umbilicus parvus, profundus; sutura impressa; apertura parva, perobliqua, ringens; peristoma circulare, acutum, album, incrassatum, patulo-reflexum, marginibus callo albo, dentiformi, emarginato excavato conjunctis, dextro dentibus duobus horizontalibus, uno obtuso, alteri acutissimo intus armato, basali dente unico perpendiculari in margine posito, munito.

Diam. maj. 14, min. 11, alt. 4 mill.

Specimen unicum in collectione Phillips conservatum in provincia Mexicana Cinaloa ripis fluminis Mazatlan collegit Gambel.

This curious Helix differs from any hitherto known. It is readily distinguished by a white, shining discoidal shell, curious aperture and internal teeth. The upper surface is composed of six whorls, five of which regularly increase from the spire, which is slightly elevated; the last is proportionally very wide, inflated, and elevated above the others, almost to a level with the apex. Below, one full ventricose whorl is visible, and more than half of another, which rapidly decreases until it becomes lost in the small umbilicus. The aperture is oblique, basin-shaped, furnished with four teeth; of these one on the parietal wall connecting the extremities of the peristome is broad, excavated in the middle, angular, resembling that of H. Troostiana, Lea, (plicata, Say); on the basal portion of the peristome is another, situated on the edge, perpendicular and short; on the right lip, slightly removed within the aperture, are two slight elongated laminæ, running horizontally, the lower one raised above the whorl for some distance, thus forming a slender, spear-like point. Behind the teeth on the outer whorl are two pits, between which the shell is pinched into a sharp ridge joining the peristome.

HELIX (POLYGYRA) LOISA. Testa albido-cornea, tenuis, supernè minutè et confertim striata, spira paululum elevata, sutura impressa, anfr. quinque, vix convexiusculi, ultimus permagnus; subtus inflata, nitida, vix perforata, anfr. 1½, ultimus ventricosus, prope peristoma bis valde scrobiculatus; alter rapidissimè decrescens, apertura ringens, quinquedentata; perist. acutum, album, incrassatum, patulo-reflexiusculum, marginibus callo albo, crasso, dentiformi, paululum intrante, angulato conjunctis, dextro laminis duobus horizontalibus, curtis, intus positis munito; basali dentibus duobus perpendicularibus in margine positis, uno parvulo, altero majore, munito.

Diam. maj. 13, min. 11, alt. 5 mill.

In Provinciâ Mexicanâ Cinaloâ ad flumen Mazatlan collegit Gambel. Collect. Phillips.

Var. minor diam. maj. 10, min 7, alt. 3. In Texas habitare dicitur. Collec. Mea.

Shell above depressed, shining, with hardly perceptible striæ, whitish, suture slightly impressed, whorls five, rather convex, last whorl rather proportionally larger, with two pits behind the peristome, and channelled; spire slightly elevated; below smooth and shining, one full ventricose whorl and a portion of a second, which rapidly decreases in the slightly perforated umbilicus; aperture basin-shaped, much complicated by five teeth; one on the parietal wall is white, heavy, angular, somewhat like that of H. Texasiana, connecting the the two extremities of the sharp and reflected peristome. On the edge of the peristome near the columella are two short, stout, perpendicular teeth, the nearer one the shorter; within the aperture are two short, slender, tooth-like, horizontal laminæ, entering but a short distance; umbilicus nearly closed; peristome white, thickened, slightly reflected.

Nearest allied to *H. ariadne*, *Pf.*, (*Couchiana*, Lea, Proc. Acad. N. S., anno 1857, April, p. 102.) I have compared it to Mr. Lea's type, and find it to be quite distinct. The latter is not perforated and has a very different arrangement of teeth. That H. Loisa is not a less developed specimen of H. Couchiana is shown by the fact of its being twice the size. Mr. Lea's shell has the parietal tooth more angular, flexuose, and entering farther into the aperture; the teeth on the right lip are not horizontal, heavier and longer, and extend to the edge of the peristome, where they are very solid and elevated, while in *Loisa* they are slender laminæ, removed within the aperture.

HELIX (POLYGRA) MOOREANA. Testa orbiculato-depressa, carinata, umbilicata, albida; spira obtusa, plus minusve elevata; anfr. 6, vix convexiusculi, striati, ultimus infra carinam non rotundatus; sutura impressa; subtus striæ minus distinctæ; anfr. 1¼, ultimus carinâ valde productâ anfr. alterum et umbilicum profundum pene tegens; apertura orbicularis, contracta, tridentata; perist. album, incrassatum, vix reflexiusculum, margine basali dentibus duobus curvatis marginalibus sinu parvulo orbiculari separatis, armato; plica alba rectangularis, dentiformis, excavata, in medio aperturæ projecta ad columellam adnata, et perist. margines connectans.

Diam. maj. 8½, min. 7, alt. 3 mill.

Hab. Washington Co., Texas. Fr. Moore!

Shell orbicular, depressed, white, carinated, umbilicated; spire more or less depressed, obtusely rounded; whorls 6, distinctly striated, hardly convex; suture impressed; below the carina the body whorl is not rounded, but slants down to the base which is parallel with the suture; below, the striæ are less distinct; at the umbilical region only 1¼ whorl is visible, the outer one strongly carinated so as to conceal a portion of the umbilicus and a great part of the remaining whorl; the umbilicus is very small, but perforates the shell to the apex, showing all the volutions with the aid of a lens; aperture rounded, contracted by three teeth; lip heavy, broad, white, hardly reflected, near the basal extremity, quite on the edge, armed with two short, incurving teeth, separated by a small rounded sinus; on the columella there is a tooth-like fold, square, projecting across the aperture, its extremities joining those of the peristome.

It is difficult to express correctly in words the specific differences of the various Polygyræ. This shell combines the characteristics of several American species. It has the spire of *H. monodon*, Rackett, and the columellar fold of *Dorfeuilleana*, Lea, as figured Tr. Am. Phil. Soc. vi., pl. xxiv., f. 118. The teeth are placed on the inner edge of the peristome, as in *Texasiana*, Mor., and the curious carination at the umbilical region resembles that of pustula, Fer., which has not been noticed in descriptions. In the collection of the Academy.

HELIX CULTELLATUS, Thomson, MSS. Testa orbiculato-depressa, nitens, carinata, corneo-rufescens, ad peripheriam et ad suturas albo-zonata; anfr. 6½ convexiusculi, striis minutis incrementalibus et lineis microscopicis spiralibus decussati; sutura impressa, apertura oblique lunaris; perist. simplex, acutum, ad columellam vix reflexiusculum; subtus lævigata, albida, infra carinam latè rufo-corneo-zonata; umbilicus perspectivus, anfr. omnes ad apicem monstrans. Diam. maj. 35, min. 19, alt. 13 mill.

Habitat. "Contra Costa Co., California." J. H. Thomson.

Animal twice the length of the diameter of the shell; color reddish.

Mr. J. H. Thompson, of New Bedford, Mass., proposes this name for a shell found by him living in considerable quantities. The circumstances in which it was discovered are very unfavorable to the supposition of its having been brought from abroad. The chances of a Dalmatian shell having been introduced into California, and already multiplying there, are very small indeed. At the same time the shell before me bears strong resemblance to the European group of this type. It seems to be between *H. albanica*, Ziegler, and *acies*, Partsch; the carina being less sharp than in the latter. Mr. Thomson suggests that it may have been imported from the Sandwich Islands on vegetables, but there is no species native to that region which bear any resemblance to this.

HELIX ANACHORETA. T. orbiculato-convexa, apertè umbilicata, cinereo-rufescens, granulata et rarè indenta; spira elevata, conica; anf. 6 convexi, ultimus subtus ventricosus; sutura impressa; perist. incrassatum, vix reflexiusculum, violaceo-albidum, umbilicum haud multum occultans, marginibus approximatis, callo conjunctis; faux violacea; apertura obliqua, transverso-rotundata. Diam. maj. 26; min. 21: alt. 14 mill.

Habitat omniam Californian. J. H. Thomson.

Shell reddish ashen, orbicularly convex; spire elevated, conic; umbilicus open, slightly concealed by the peristome; whorls six, granulated and sparsely indented; suture impressed; below ventricose; aperture transversely rounded; peristome thickened, scarcely reflected, whitish, with a violet tinge, the extremities approaching each other and connected with a callous on the parietal wall; throat violet.

"Animal light ashen color, tentacles nearly white; average length of some thirty specimens 2½ inches (2 diameters of shell); superior tentacles 5-8ths; inferior 3-16ths inch; foot broad at the posterior extremity; a line of large granules down the middle of the back; sides of foot margined with a line of light granules (pores); genital orifice posterior to and beneath the larger tentacles. In its habits solitary." Thomson.

It with some hesitation that I propose a name for this shell. I at first considered is as a bandless variety of *Californiensis*, Lea. But on expressing this opinion to Mr. Thompson, he gave me the above description of the animal and its habits, which are quite distinct from those of Mr. Lea's shell. Its characteristics were found constant at various remote points of the State, and in a considerable number of specimens. They seem too great for a simple variety. The animal is also different in its habits from *Californiensis*, being found only solitary, while the latter is gregarious.

The shell is one of the very few bandless species of California.

HELIX ÆRUGINOSA, Gould. (Proc. Boston Soc. N. H., Feb., 1855, p. 137.) Nomen transmutandum est ob. H. æruginosam, Pf. (Pro. Zool. Soc., London, 1854.) This name being preoccupied for a Philippine Island shell, Dr. Gould proposes to call it H. ARROSA. "Inhabits only Redwoods." (Thompson). It seems a very variable shell. The type resembles in shape *H. Towsendiana*, Lea. Among the land shells collected in California by Dr. J. S. Newberry, P. R. R. Survey, was one which I called var. β of Dr. Gould's shell. It has a very elevated, conical spire, like *elevata*, Say, but agrees in other respects with the type. The Californian land shells seem very difficult to understand on account of their variation. Although this shell bears little resemblance to *Californiensis*, Lea, as fig. in Tr. Am. Ph. Soc., vi., pl. xxiii., f. 19, there is a gradual blending of the two. For some of the links in the connecting chain, see the fig. Terr. Moll. iii, vi. *a*, Reeve, Con. Icon. 661, and Chemn. Ed. 2, pl. lvii. fig. 14, 15. The last resembles *arrosa*, var. β very much. This connecting chain of resemblance is also carried by specimens in my cabinet to *Dupetithuarsi*, Desh. Future research will alone enable us to draw the correct divisions of the species.

Helix (Polygyra) tholus. Testa solidiuscula, albida, nitens, costis obliquis notata; spira rotundata, elevatiuscula, obtusa, tholiformis; sutura valde impressa, anfr. 7, convexiusculi, superi magis planulati, ultimus ad aperturam descendens, obtusè carinatus, carina peristoma non attingens, post perist. canaliculatus; infra carinam costæ minus distinctæ; basis plana, umbilicus latus, perspectivus, anfractus canaliculatos monstrans, quorum 2½ perspicuè alii obscurè videntur; apertura perobliqua, ab axe remota; perist. album, semicirculare, latum, incrassatum, margine basali reflexiusculo, dentibus duobus sinu rotundato disjunctis armatum; plica parietalis acuta, in medio aperturæ projecta, margines peristomatis vix connectens. Diam. maj. 11; min. 9; alt. 4 mill.

Habitare in Texas suspicor, sed incertus sum. Specimen unicum vidi in coll. Bland conservatum.

Shell rather solid, white, shining, ribbed above, smoother below; spire obtuse, little elevated, rounded; whorls seven, convex, the upper ones more flattened, the last bluntly carinated; carina not reaching the peristome; base parallel to the suture; umbilicus broad, half the larger diameter of the shell, showing two and a half deeply grooved whorls plainly, the others rapidly retreating towards the apex; aperture very oblique, semicircular, removed from the axis of the shell, bordered with a scarcely reflected, white, heavy rim, grooved behind, and armed with two stout teeth near the basal extremity, broadly reflected at the junction with the body whorl; on the parietal wall of the aperture is a white fold, hardly connecting the extremities of the lip, and projecting across the aperture into an acute point.

The aperture of this curious shell resembles that of H. *fatigiata*, Say. It is readily distinguished from that and all other described species by the umbilicus, broad at the commencement, and rapidly narrowing beyond the second whorl, with the peculiar groove visible in all the whorls of the umbilicus, of the same character as that noticed by Say in *auriculata*, though deeper.

The name is derived from the resemblance of the slightly raised, rounded spire to a low dome.

Helix kopnodes. Testa depresso-globosa, corrugata, subtus lævigata; spira brevis, depressa; sutura mediocris; anfr. quinque, rapidè accrescentes, ultimus permagnus, ventricosus, interdum lineis volventibus crassis notata; apertura magna, rotundata; perist. simplex, acutum, marginibus approximatis, callo levi, brunneo conjunctis; ad umbilicum parvum et profundum reflexiusculum. Diam. maj. 35; min. 28; alt. 13 mill.

Habitat in Alabama, (C. S. Hale!)

Forsan forma monstruorsa H. *fuliginosæ*, Binney, sed differt speciminibus meridionalibus colore, testâ majori, solidiori, magis globosâ; umbilico angustiori; aperturâ majori, magis rotundatâ, spira magis elevatâ; et lineis volventibus. Varietates alligantes non exstant.

Figura Reeveana, Con. Icon. No. 672. Etsi minus globosa, affinis paritur sed minutè costellato-striata dicitur.

Shell depressed-globose, wrinkled, below smooth; spire short, depressed; suture moderate; whorls five, rapidly increasing, the last very ventricose and large, sometimes marked with coarse revolving lines; aperture large, round, lip simple, acute, ends approached, joined by a slight deposition of brownish callus over the parietal wall, reflected at the small and deep umbilicus.

It is a much larger and more globose shell than H. *fuliginosa*, Binney, with a smaller umbilicus, more rounded and larger aperture, and more ventricose body whorl; its color is also lighter. The revolving lines are present in four out of six specimens before me.

Reeve's fig Con. Icon , No. 672, has some resemblance to it in shape, though less globose—but differs in being striate above.

In the collection of the Academy.

Helix friabilis. Testa globosa, papyracea, friabilis, subdiaphana, nitens, rufescens; spira parvula, elevato-conica; anfr. quatuor, læviter corrugati, convexi, ultimus permagnus, ventricosissimus; sutura mediocris; apertura circularis, parum alta et longa, intus livida, callo levi albo sub-incrassata; perist. acutum, tenue, simplex, ad basin reflexiusculum, violaceum, umbilicum parvum et profundum aliquantum tegens. Diam. maj. 26; min. 20; alt. 13 mill.

Habitat in ripis fluminis Wabash, (Mrs. Say!) In Illinois (R. Kennicott!)

Species rara, ad sectionem H. *fuliginosæ*, Binney, referenda, sed testâ papyraceâ et rotundatâ, spirâ elevatâ, et aperturâ circulari distincta.

Shell very globose, transparent, brittle, thin, shining, reddish; spire very short, conic; whorls four, convex, lightly wrinkled, rapidly increasing, the last very large and ventricose; suture moderate; aperture circular, equally high and broad, within bluish and slightly thickened by a very thin white callus; perist. simple, sharp, thin, at its junction with the body whorl, violet colored and reflected, so as to cover a portion of the small and deep umbilicus; the parietal wall of the aperture is covered with a light violet colored callus.

Belongs to the same group as H. *fuliginosa*, Binney—but readily distinguished from that and all described species by its transparent, globular shell, ventricose body-whorl, and circular aperture. At the localities where it was found by Mr. Kennicott, H. fuliginosa was not noticed.

There is a shell received from Texas, by Dr. Newcomb, which may prove to be identical with this.

In the collection of the Academy.

Helix redimita. Testa globoso-conica imperforata, tenuiscula, minutè et confertim granulata, corrugata, rufo-brunnea; apex lævigata, obtusula, spira elevata; anfr. 6 convexi, suturâ impressâ distincti, ultimus permagnus, inflatus, ad aperturam descendens, supra medium fasciâ fuscâ redimitus; apertura perobliqua, transverso-orbicularis, intus unifasciata; perist. simplex, rufocinereum, incrassatulum, marginibus valde approximatis, basali reflexiusculo, callo albo umbilicum tegente. Diam. maj. 21; min. 17; alt. 12 mill.

Syn. Helix Nickliniana, Binney, Terr. Moll. iii. pl. vi, f. 1, exceptâ icone in medio positâ.

Habitat in California aut in Oregon?

Shell globose-conic, imperforate, rather thin, wrinkled, covered with minute and crowded granulations; color reddish brown; apex free from granules, rather blunt; spire elevated; suture impressed; whorls six, convex, the last quite large and rounded, falling towards the aperture, and banded with reddish brown above the middle; aperture rather large in proportion to the size of the shell, very oblique, transversely rounded, within showing the band; peristome simple, reddish ash color, thickened, reflected slightly at the base, ends approached; umbilicus entirely covered with a white callus.

This shell is figured by my father as a var. of H. *Nickliniana*, Lea. A reference to Mr. Lea's figure and description will at once show it to be distinct, according to the present notions of specific weight. Dr. Gould refers it (Terr. Moll. iii. p. 26) to H. *Californiensis;* Reeve, Con. Icon. 661. It appears, however, to be distinct from the shell there figured.

In general outline it resembles H. *Kellettii*, Forbes, Proc. Zool. Soc., London, 1850, pl. ix, f. 2, as well as Reeve's fig. 665 *b*, not 665 *a*, Con. Icon. The resemblance will be found, however, to cease with the outline, on a comparison of the two shells. H. *Kellettii* is sometimes perforate, is differently colored, and belongs rather to the group of California Helices represented by H. *areolata.*

Sowb. and H. *Pandoræ*, Forbes, than that of H. *Californiensis*, Lea, *intercisa*, nob. and the shell before me.

Helix Dupetithouarsi, Desh. In the collection of the Smithsonian Institute there are specimens of this shell which are furnished with a delicate greenish yellow epidermis. As this has never been noticed in descriptions, I believe it must exist only on very fresh specimens, which are rarely seen. On being immersed some minutes in water, the epidermis becomes of a bright golden color.

Helix labiosa. Gould, (by many considered identical with *Columbiana*, Lea.) To Mr. J. H. Thomson I am also indebted for the following interesting notes on this shell. It will be very important to dissect the animal, as it may prove generically distinct from Helix.

"Animal twice as long as the breadth of the shell, dark slate color, almost black on the head and tentacles; a black line running along each side of the back from the base of the longer tentacles; body covered with compressed granules; tentacles black, acutely pointed: *eyes at the base of superior tentacles;* anatomy believed to resemble, somewhat, that of the Lymniadæ. Gregarious; in its habits resembling Lymnæa, being found always near water, and laying its eggs on the water-cresses and other aquatic plants. Arrives at maturity in one year, one half the time required by the other species."

Helix Californiensis, Lea. "Animal reddish grey, tentacles and base of foot bluish; quite narrow in proportion to the length of the shell; tentacles short. Gregarious, inhabiting dry gullies and hill sides; many specimens found in a cabbage garden." Thomson.

Helix sportella, Gould. I am indebted to Mr. Thomson for a fine specimen of this rare species, the only one I have ever seen. His notes show the animal to be quite distinct from that of H. *concava*, Say, however similar the shells may be, with the exception of the striæ on the Californian species. He writes, "Animal uniformly white or flesh colored, with an orange line on top of back. Solitary—or only found in pairs."

Helix loricata, Gould. (*Lecontii*, Lea.) This rare species also was added to my collection through the liberality of Mr. Thomson. One specimen found by him was very much larger than Dr. Gould's shell. He gives the following description of the animal: "white, linear, rough, posteriorly acute, tentacles very short."

Bulimus Dormani, n. s. Testa perforata, ovato-turrita, lævigata, albida, fasciis fuscis longitudinalibus ornata; sutura impressa; spira elongato-conica; acuta; apex punctulata; anfr. 6 convexiusculitis, lineis minutissimis volventibus ornati, superi striati, ultimus inflatus, ad marginem superam peristomatis, obtusissimè carinatus; apertura ovata, partem testæ dimidiam subæquans; perist. simplex, acutum, margine columellari reflexiusculum, perforationem pene occultans. Diam. 12; long. 29 mill.

Habitat in peninsula Florida prope St. Augustine. O. S. Dorman!

Shell perforated, rather heavy, shining, elongated-conic; white, with several regular revolving series of interrupted perpendicular, reddish brown patches; suture distinctly marked; apex punctured; whorls 6, rather convex, marked with numerous very fine revolving lines; upper whorls striate; last whorl full, with a hardly perceptible obtuse carina at the upper extremity of the peristome.

The only described species with which this shell can be confounded is B. *Floridianus*, Pf., Proc. Zool. Soc., London, 1855, p. 330. Though I have never seen Dr. Peiffer's shell, I should consider it nearly allied, though distinct. It wants the minute revolving lines, the punctured apex, and striate upper whorls, which characterize B. *Dormani*, is a smaller shell, and has a different marking, being furnished with opaque whitish blotches as well as reddish patches; the latter also do not extend to the body whorl.

GLANDINA CORNEOLA. Testa conico-oblonga, tenuis, nitens, cornea; anfr. 7 ad 8, convexi, tenuissimè et longitudinaliter striati, et lineis minutis creberrimis notati; sutura crenulata; apertura oblonga, partem testæ dimidiam æquans; columella contorta, truncata, callo induta. Diam. 18; long. 50 mill.

Syn. Glandina truncata, var. Binney non Gmel. Terr. Moll. iii. pl. lxi. f. 1.

Habitat in Rebuspublicis meridianis. Florida?

Shell oblong-conic, thin, shining, horn color; whorls 7 to 8, longitudinally striate, and covered with numerous minute revolving lines; suture slightly crenulated; aperture oblong, half as long as the shell; columella curved, truncated, covered with light callus.

This shell, very rare in collections, is distinguished by its light horn color, thin shell and revolving lines.

GLANDINA PARALLELA. Testa solida, albida, nitens, cylindraceo-elongata, striis creberrimis longitudinalibus notata; spira elevato-obtusa; anfr. 5 ad 6, superi convexi, ultimus lateribus rectis, æquis intervallis inter se distantibus, apertura angusta, partem testæ 3–7 æquans; labrum flexuosum, in medio rectum, margine basali curvatum; columella recta, truncata, callo induta. Diam. 20; long. 56 mill.

Syn. Glandina truncata, var., Binney. Terr. Moll. iii. pl. lxii. f. 2.

Habitat in Louisiana, Rev. E. R. Beadle!

Shell heavy, shining, white, elongated, cylindrical; spire elevated, obtuse; whorls 6 to 7, with numerous, delicate, longitudinal striæ, the upper ones convex, the last one with straight parallel sides; lip straight along the middle, and parallel to the rectilinear side of the opposite whorl, at the basal extremity curved; columella straight, truncated, covered with a heavy callus.

Distinguished by its peculiar parallel sides and heavy texture from any other described species.

The following are notes on the plates contained in Vol. iii. of the Terrestrial Mollusks.

HELIX RUGELI, Shuttleworth, (Diag. neuer Moll. No. 2,) is described as always larger than H. inflecta, Say. I have the latter of the same dimensions as given for Rugeli, 13 mill., and some specimens of Mr. Shuttleworth's shell only 8 mill.

HELIX MORDAX, Shuttleworth, is a variety of H. alternata, Say. I have a large series, showing a gradual change from the typical Northern Shell to the strongly ribbed and more or less carinated Southern form. H. *strongolydes*, Pfeiffer, is also a variety of the same shell. Perhaps, also, H. infecta, Parr.

HELIX MULTILINEATA, Say. I have a variety of this with an open umbilicus. Another, received from Mr. J. A. Lapham, of Wisconsin, is small, of an uniform brownish-red, without any revolving lines.

HELIX CLAUSA, Say. Terrestrial Mollusks, pl. iv. The outline figures do not represent this species.

H. VINCTA, Val., Terr. Moll. iii. pl. vi., is certainly distinct from Californiensis, Lea. (Compare his fig. and descr. T. Am. Ph. Soc. vi. pl. xxiii., f. 79.)

The centre figure of this plate is H. intercisa, nob. Proc. A. N. S. Phila., 1857, p. 18. Fig. 1. Upper and lower figure cannot be considered a variety of Nickliniana. I propose for it the name of *redimita.*

Pl. vi. *a.* The European conchologists now consider H. Nickliniana and Californiensis as identical, and figure this shell under the latter name.

H. DENTIFERA is not confined to Vermont. It is a mountain shell, has been found by Mr. Edwards in Virginia, Dr. S. E. Shurtleff in Western Pennsylvania, Mr. Conrad at Broad Top Mountain, and Mr. Phillips on the Lehigh.

H. Nuttalliana, Lea, is universally considered as H. fidelis, Gray. Mr. Gray's description has the priority of several years.

H. Vancouverensis, Lea. I see no reason why H. vellicata, Forbes, should not be considered as a variety of this.

H. egena, Gould non Say, pl. xxii. *a.* This shell, though never seen by Mr. Say, is called by one of his names. It is certainly a disadvantage to increase the already burthensome nomenclature, but is it not worse to make one name serve for two distinct species? Mr. Say's shell was found by Mr. J. S. Phillips at the 8 mile lane above Philadelphia, and is still preserved in his collection. I think it will prove to be distinct from *chersina*, Say. The latter has a much more elevated spire, rounded at the top like *labyrinthica*, Say, and is only obtusely carinated; while in *egena*, Say, a very acute carina divides the shell into a short, pyramidal, sharp spire, and a rounded, inflated base, whose outline forms a semicircle. As I consider H. egena a good species, I leave it to Dr. Gould to propose another name for the Florida shell.

Helix fallax, Say, is certainly more than a variety of tridentata, Say. Not only are the characteristic differences well marked, but the habits of the respective animals are different. Mr. J. G. Anthony tells me that *tridentata* is found on hill sides in the grass, while *fallax* inhabits rich soils, in woods, under logs, and is not gregarious like the former. The difficulty is to mark the dividing line between the many varieties of fallax, some of which are quite as distinct as H. Hopetonensis, Shuttl. In one specimen of *fallax* in my cabinet there is a well developed "fulcrum" as in monodon, spinosa, and others mentioned by Mr. Lea.

Helix minutissima, Lea, is certainly distinct from H. minuscula, Binney. Had my father been spared to finish his work, he would have withdrawn the opinion expressed in Vol. ii., p. 221. I have a note of his taken at Mr. Lea's house, in which he says they are distinct. Dr. Leidy tells me that he made a figure of Lea's type for engraving, which was subsequently lost.

Helix costata, Müll. Dr. F. V. Hayden collected many thousands of this ribbed variety of pulchella, Müll. (minuta, Say,) in Nebraska. It had hitherto been noticed only in Philadelphia and Cincinnati.

Helix glaphyra, Say, pl. xxix., f. 4. That this shell is identical with *cellaria*, Müll., was the opinion of Dr. Binney. I am able to add to the same effect the testimony of two of our first conchologists, Mr. J. G. Anthony and Dr. Griffith. The former tells me that thirty years ago he found a shell in considerable numbers in his garden, at Providence, R. I., in all respects agreeing with the European *cellaria*. On carrying it to Philadelphia, the conchologists of that time all called it *glaphyra*, Say. The testimony of Dr. Griffith is still more conclusive. I have a letter of his to my father in which he says that he *had seen* Say's type of *glaphyra* in the collection of the Academy, and that it was certainly the *cellaria* of Europe. He adds, that when arranging the collection, the shell was broken and thrown aside.

Helix saxicola, Binney non Pf. pl. xxix.*a.* f. 4, is *H. incrustata*, Poey. It agrees in all respects with the Cuban specimens in the Academy received from Mr. Poey.

Helix lucubrata, Binney non Say, pl. xxxii. does not represent Say's shell. Though figured by Deshayes in Fer. Hist. pl. lxxxii. f. 6, it was first *described* by Pfeiffer, Mong. i, p. 64. The common form is hardly as globose as the shell figured.

Helix sulplana, Binney, has been found by Mr. J. S. Phillips on the banks of the Susquehanna, near Wyoming, Pa.

Helix intertexta, Binney, pl. xxxvi. The southern form of this shell would by many be hardly considered as the same species. The spire is very much flattened, color much lighter, body whorl less inflated and very sharply carinated. The northern form very rarely reaches the size figured.

HELIX SEPTEMVOLVA, Say, pl. xxxviii. The middle figures come nearest to Muhlfeldt's type of *cereolus*, figured in the Berlin Magazine. The internal lamina mentioned on page 31 is found constantly in H. microdonta, Desh. of Florida. It is not, however, confined to that alone, (Shuttl. Diag. Neuer Moll. No. 2,) as I have detected it in a few instances in the large *cereolus* and other forms. In Florida there are several varieties of this shell as well worthy of specific distinction as microdonta, Desh., volvoxis, Parr, and delitescens, Shuttl. Muhlfeldt's name *cereolus* has priority, having been published in 1816, and not 1818 as quoted by Pfeiffer, &c. The European conchologists, Pfeiffer, Reeve, &c., mention as a synonym of this shell *H. polygyrata*, Binney, a name not even mentioned by him.

HELIX SUPPRESSA, Say, small var. Pl. xxxvii. fig. 3. This appears to be *bicostata*, Pf.

HELIX PLICATA, Say, pl. xxxix. f. 2. Mr. Say's type is preserved in the collection of the Academy. Having carefully compared it with Mr. Lea's original *Troostiana*, I am led to believe them identical. In this case Mr. Lea's name alone will stand, as that of Mr. Say is preoccupied. In Vol. ii. p. 195, H. plicata is said to be identical with fatigiata, Say, Dorfeuilleana, Lea, and Troostiana, Lea. I cannot agree with this opinion; H. fatigiata is certainly distinct from the others. (Pl. xxxix. f. 2.) The characters on which Mr. Lea's two species are founded are certainly not very distinct; at the same time their constancy gives them weight. Of twenty-five specimens found in Tennessee by the Rt. Rev. Bishop Elliott, all were well marked H. Troostiana.

HELIX LEPORINA, Gould, had been found only in Mississippi and Arkansas, until Mr. Postel discovered it at St. Simon's Isle, Georgia, Dr. H. M. Neisler in Butler County, of the same State, and Bishop Elliott at Savannah. Future research will probably prove it an inhabitant of the whole South.

HELIX MAXILLATA, Gould, has also been found by Dr. H. M. Neisler in Butler County, Georgia.

HELIX BUFFONIANA, Pf., pl. xliii. This seems rather the variety which Pfeiffer described formerly as distinct under the name of Humboldtiana ; he now unites the two.

HELIX INFLECTA, Say, pl. xlv. f. 3. It is a typographical error on p. 33 to call this H. triodonta, Jahn.

HELIX POLYCHROA, Binney, pl. xlvi. xlvii. It is hardly necessary to find another name for this shell (ob. H. polychroam, Sowb.) as it seems to be varians, Mke.

HELIX SELENINA, Gould, pl. xlviii. This is certainly H. vortex, Pf., of the West Indies. I do not agree with Dr. Gould, (p. 34,) in considering H. tenuistriata, Binney, as the same shell; a comparison of the description of the latter will show them to be distinct. The geographical distribution is also very different. Dr. Binney's shell is from Tennessee, while *vortex*, is a West Indian species, introduced only into the Southern extremity of Florida. The description on the cover, Boston Journal Nat. Hist. iv. part 1, anno 1842, is as follows. "*Helix tenuistriata.* Testa depressa, carinata, umbilicata, albido cornea; anfr. 7 oblique striatis ; opertura angusta, depressa, labro subreflexo, basi convexo. Lat. ½ poll. Hab. Tennessee." I have a shell in my cabinet to which this description applies pretty well ; I am not sure, however, that it is the same. Future research will undoubtedly bring the species to light.

HELIX AURICULATA, Say, pl. xl. I do not consider fig. 2, H. avara, Say, as a var. of this, but a distinct species. There are some varieties of *auriculata*, which may be confounded with it, but it is certainly a good species. Among other distinctive characteristics it is *hirsute*, as mentioned by Say. I am indebted to Mr. James Postel, of St. Simon's Isle, Georgia, for some very fine fresh hirsute specimens. From Mr. O. S. Dorman of St. Augustine, Fa., I have some fine specimens of *auriculata*, 16 mill. in the greatest diameter.

HELIX ELEVATA, Say. Mr. Robert Kennicott collected in Wisconsin two specimens of a curious variety of this species, furnished with a broad, revolving, brownish band on the body whorl.

HELIX STENOTREMA, Ter. pl. xlii. f. 4, is a very well marked variety of hirsuta, confined to the region of Tennessee.

BULIMUS DEALBATUS, Say, pl. li. However well defined may be the distinctive characteristics of this species and B. schiedeanus, lactarius, &c., it is extremely difficult to trace the dividing line between them, when seen in large quantities. I have specimens picked from the same bush in Texas, some of which would be referred to each of these species. At the same time it seems hardly possible that the large, heavy shell figured on pl. li. *b*, should be the same species as the small, fragile shell pl. li., fig. 1. At all events, it is necessary to distinguish them by different names.

ACHATINA PELLUCIDA, Pf. pl. liii. f. 2, is Blauneria (Voluta) heteroclita, Mont. Dr. E. Foreman has specimens found in his garden at Washington, whither they were brought on plants from Charleston, S. C, Mr. T. Bland found it inhabiting brackish water in Jamaica.

BULIMUS VIRGULATUS, Binney non Fer. pl. lviii., (see remarks Vol. ii. p. 279.) I concur entirely with Dr. Gould in considering this shell identical with *B. multilineatus*, Say, which name has the priority of many years of Reeve's name *venosus*. Ferussac's shell is quite distinct.. Mr. Say's description of *B. multilineatus*, (Journ. Acad. N. S., Phila., Vol. 5, p. 120, anno 1825,) is as follows: "Shell conic, not very obviously wrinkled; whorls not very convex, yellowish white, with transverse, entire, reddish brown lines; a blackish subsutural revolving line; apex blackish; umbilicus small, surrounded by a broad blackish line; columella whitish, labrum simple, blackish. Length less than 7-10th inch, greatest breadth less than 7-20th inch. This species was found by Mr. Titian Peale on the southern part of East Florida."

Mr. Bartlett found the *virgulatus*, Binney, in the same locality.

GLANDINA TRUNCATA, Binney non Gmel., pl. lxi. f. 1, is G. corneola, nob. vid. supra. Fig. 2 is G. Texasiana, Pf., Novitates Conch. p. 7, pl. xxii. f. 11, 12. Figure 2, pl. lxii. is G. parallela, nob. vid. supra.

HELICINA ORBICULATA, Binney non Say, Pl. lxxiii. last line, middle figure, is Hel. tropica, Jahn.

HELICINA CHRYSOCHEILA, Binney, pl. lxxiv. f. 4. I have specimens of this shell in my cabinet, and consider it distinct from Hel. Jamaicensis, Sowb., and all other described species. I have a note taken by my father at the collection of M. Petit de la Saussaye in Paris, in which he says that a similar shell is labelled from Tampico. Compare Hel. *turbinata*, Wiegm., Ch. ed. 2, pl. iv. f. 13, 14, 15.

Notes on American Land-Shells, deposited by Mr. Say, and still preserved in the collection of the Academy.

HELIX LUCUBRATA, Say. I have lately found among the shells of the Academy three specimens of a shell labelled many years ago, "*Helix lucubrata*, Say—Mexico." I have made a very critical comparison of them with authentic specimens of *H. caduca*, Pf., received through the kindness of Mr. Cuming. I am now confirmed in the opinion I expressed before, that the two shells are undoubtedly identical. The resemblance of these Mexican shells to *H. fuliginosa*, Binney, is strong enough to have given Dr. Griffith the impression that they were the same. He expressed himself to that effect in letters to my father. From Dr. Griffith, Prof. Adams may have received the same impression (see Vt. Moll.) I am inclined to differ from them, believing the species, though nearly allied, to be quite distinct. Until we receive the true *H. fuliginosa* from the South-western States, I shall doubt its existence there. Our country has been too little searched, however, to allow us to draw very nicely the lines of geographical distribution. If I am correct in my view of this species, Mr. Say's name will, of course, take precedence over that of Dr. Pfeiffer.

HELIX CLAUSA. The specimens are much more globose than that figured in Am. Conch. The aperture is quite orbicular.

HELIX APPRESSA, HIRSUTA, INFLECTA, PROFUNDA, AURICULATA, LIGERA, SOLITARIA, SUPPRESSA.

H. FATIGIATA, as fig. in Terr. Moll. iii. pl. xxxix, f. 4.

H. PLICATA. Like *Troostiana,* Lea.

H. FALLAX. The upper denticle on the peristome placed within the aperture, like that of *H. vultuosa,* Gould.

H. SEPTEMVOLVA. Large and small var. of *cereolus,* Mhtl.

SUCCINEA AVARA, CAMPESTRIS. Same as figured in Terr. Moll.

HELICINA ORBICULATA, OCCULTA, (fossil.)

PUPA PENTODON, CORTICARIA, ARMIGERA.

ACHATINA SOLIDA. More elongated than that fig. in Terr. Moll.

November 3d, 1857.

Vice President LEA in the Chair.

Mr. Slack remarked, that the specimens of chalcedony and quartz presented by him this evening, had been obtained from a quarry on the left bank of the Nile, whence was procured the limestone used in the erection of the Pyramids. They appear to have been rejected by the workmen when selecting the lime.

November 10th, 1857.

MR. CASSIN in the Chair.

Dr. Morris called the attention of members to an appearance of the eastern horizon just before, at and after sunset. On any clear evening, after a warm day, a person looking towards the east a few minutes before sunset, will observe a red band of light extending along the whole horizon; above, it is gradually shaded into yellow light, which passes into greenish, and finally into blue, at various distances from the zenith. As the sun decends in the west, these bands of red and yellow light rise in the east, until the red makes an angle of about 15° with the plane of the horizon, leaving a clear dark blue space beneath. The colors are brightest about ten minutes after apparent sunset: after which they gradually fade away. A cloudy or misty state of the atmosphere near the zenith of the observer obscures or prevents the occurrence of the phenomenon: but a fog-bank in the horizon does not interfere. In Kæmtz's Meteorology, translated by Walker, page 408, the same phenomenon is partially described, but he places the "white or yellow stripe" between the red and the blue of the horizon, or below the red. I have never seen it anywhere but as above. Kæmtz thinks that the blue is due to the shadow of the earth projected against the eastern sky, while the red